May Gr. 5. Technology

Content Area: **Technology**
Course(s):
Time Period: **May**
Length: **4-5 Weeks**
Status: **Published**

Unit Overview

Students will work on coding, excel spreadsheets and learn about robots in the workplace.

Enduring Understandings

Technology is useful to us in many different functions.

Essential Questions

What is a spreadsheet?

Instructional Strategies & Learning Activities

Objective: Intro to Coding - ONLINE activites code.org (Course F)
The student will be able to begin to learn and understand basic concepts about coding - algorithms, loops, & conditionals, and FUNCTIONS - creating code in a "blockly" language which writes Javascript 'under the hood'.

Differentiation:
Self-paced

Assessment:
Teacher dashboard reports

Objective: Everyday Robots! - ReadWorks and You Tube video
The student will be able to learn about real life robots and their real impact on society.

Differentiation:
Fact-based opinions

Assessment:
Objective questions checked to Answer Key

Objective: Excel Jelly Bean Project
The student will be able to create and format a simple spreadsheet and showcase the data on an accompanying

column chart.

Differentiation:
N/A

Assessment:
Rubric

Objective: Introduction to EduTyping and Keyboarding Techniques

Differentiation:
Students will work at own pace

Assessment:
Observe students working accurately while demonstrating effort on each activity, Teacher Reports

Integration of Career Readiness, Life Literacies and Key Skills

9.4.5.CI	Creativity and Innovation
9.2.5.CAP	Career Awareness and Planning
	An individual's passions, aptitude and skills can affect his/her employment and earning potential.
	Collaboration with individuals with diverse perspectives can result in new ways of thinking and/or innovative solutions.
9.2.5.CAP.1	Evaluate personal likes and dislikes and identify careers that might be suited to personal likes.
9.2.5.CAP.2	Identify how you might like to earn an income.
	Curiosity and a willingness to try new ideas (intellectual risk-taking) contributes to the development of creativity and innovation skills.
9.2.5.CAP.3	Identify qualifications needed to pursue traditional and non-traditional careers and occupations.
9.2.5.CAP.4	Explain the reasons why some jobs and careers require specific training, skills, and certification (e.g., life guards, child care, medicine, education) and examples of these requirements.
9.4.5.CT	Critical Thinking and Problem-solving
	The ability to solve problems effectively begins with gathering data, seeking resources, and applying critical thinking skills.
9.4.5.CT.3	Describe how digital tools and technology may be used to solve problems.
9.4.5.CT.4	Apply critical thinking and problem-solving strategies to different types of problems such as personal, academic, community and global (e.g., 6.1.5.CivicsCM.3).
9.4.5.IML	Information and Media Literacy
	Digital tools and media resources provide access to vast stores of information, but the

	information can be biased or inaccurate.
9.4.5.IML.1	Evaluate digital sources for accuracy, perspective, credibility and relevance (e.g., Social Studies Practice - Gathering and Evaluating Sources).
	Digital tools can be used to modify and display data in various ways that can be organized to communicate ideas.
9.4.5.IML.2	Create a visual representation to organize information about a problem or issue (e.g., 4.MD.B.4, 8.1.5.DA.3).
9.4.5.IML.3	Represent the same data in multiple visual formats in order to tell a story about the data.
9.4.5.TL	Technology Literacy
9.4.5.TL.1	Compare the common uses of at least two different digital tools and identify the advantages and disadvantages of using each.
9.4.5.TL.2	Sort and filter data in a spreadsheet to analyze findings.

Technology and Design Integration

See activities above and standards below.

CS	Computing Systems
	Computing devices may be connected to other devices to form a system as a way to extend their capabilities.
8.1.5.CS.1	Model how computing devices connect to other components to form a system.
	Software and hardware work together as a system to accomplish tasks (e.g., sending, receiving, processing, and storing units of information).
8.1.5.CS.2	Model how computer software and hardware work together as a system to accomplish tasks.
	Shared features allow for common troubleshooting strategies that can be effective for many systems.
8.1.5.CS.3	Identify potential solutions for simple hardware and software problems using common troubleshooting strategies.
NI	Networks and the Internet
8.1.5.NI.2	Describe physical and digital security measures for protecting sensitive personal information.
DA	Data & Analysis
8.1.5.DA.1	Collect, organize, and display data in order to highlight relationships or support a claim.
8.1.5.DA.2	Compare the amount of storage space required for different types of data.
8.1.5.DA.3	Organize and present collected data visually to communicate insights gained from different views of the data.
8.1.5.DA.4	Organize and present climate change data visually to highlight relationships or support a claim.
8.1.5.DA.5	Propose cause and effect relationships, predict outcomes, or communicate ideas using data.

Interdisciplinary Connections

LA.RI.5.4	Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 5 topic or subject area.
LA.W.5.2.D	Use precise language and domain-specific vocabulary to inform about or explain the topic.
LA.W.5.6	With some guidance and support from adults and peers, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of two pages in a single sitting.
LA.W.5.7	Conduct short research projects that use several sources to build knowledge through investigation of different perspectives of a topic.
LA.SL.5.1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.
LA.SL.5.5	Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes.
LA.L.5.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
LA.L.5.2	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
LA.L.5.3	Use knowledge of language and its conventions when writing, speaking, reading, or listening.
LA.L.5.4	Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.

Differentiation

- Understand that gifted students, just like all students, come to school to learn and be challenged.
- Pre-assess your students. Find out their areas of strength as well as those areas you may need to address before students move on.
- Consider grouping gifted students together for at least part of the school day.
- Plan for differentiation. Consider pre-assessments, extension activities, and compacting the curriculum.
- Use phrases like "You've shown you don't need more practice" or "You need more practice" instead of words like "qualify" or "eligible" when referring to extension work.
- Encourage high-ability students to take on challenges. Because they're often used to getting good grades, gifted students may be risk averse.

- **Definitions of Differentiation Components**:

    - Content – the specific information that is to be taught in the lesson/unit/course of instruction.
    - Process – how the student will acquire the content information.
    - Product – how the student will demonstrate understanding of the content.
    - Learning Environment – the environment where learning is taking place including physical location and/or student grouping

Differentiation occurring in this unit:

Differentiation will be offered as listed in the above activities.

Modifications & Accommodations

Refer to QSAC EXCEL SMALL SPED ACCOMMOCATIONS spreadsheet in this discipline.

Modifications and Accommodations used in this unit:

IEP and 504 Accommodations will be utilized.

Benchmark Assessments

Benchmark Assessments are given periodically (e.g., at the end of every quarter or as frequently as once per month) throughout a school year to establish baseline achievement data and measure progress toward a standard or set of academic standards and goals.

Schoolwide Benchmark assessments:

Aimsweb benchmarks 3X a year

Linkit Benchmarks 3X a year

DRA

Additional Benchmarks used in this unit:

Teacher made assessments to measure growth.

Formative Assessments

Assessment allows both instructor and student to monitor progress towards achieving learning objectives, and can be approached in a variety of ways. **Formative assessment** refers to tools that identify misconceptions, struggles, and learning gaps along the way and assess how to close those gaps. It includes effective tools for helping to shape learning, and can even bolster students' abilities to take ownership of their learning when they understand that the goal is to improve learning, not apply final marks (Trumbull and Lash, 2013). It can include students assessing themselves, peers, or even the instructor, through writing, quizzes, conversation, and more. In short, formative assessment occurs throughout a class or course, and seeks to improve student achievement of learning objectives through approaches that can support specific student needs (Theal and Franklin, 2010, p. 151).

Formative Assessments used in this unit:

Discussion

Teacher observation

projects

Summative Assessments

summative assessments evaluate student learning, knowledge, proficiency, or success at the conclusion of an instructional period, like a unit, course, or program. Summative assessments are almost always formally graded and often heavily weighted (though they do not need to be). Summative assessment can be used to great effect in conjunction and alignment with formative assessment, and instructors can consider a variety of ways to combine these approaches.

Summative assessments for this unit:

Projects

Assessments listed above

Instructional Materials

Materials as needed for projects

Standards

See Standards above.